

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



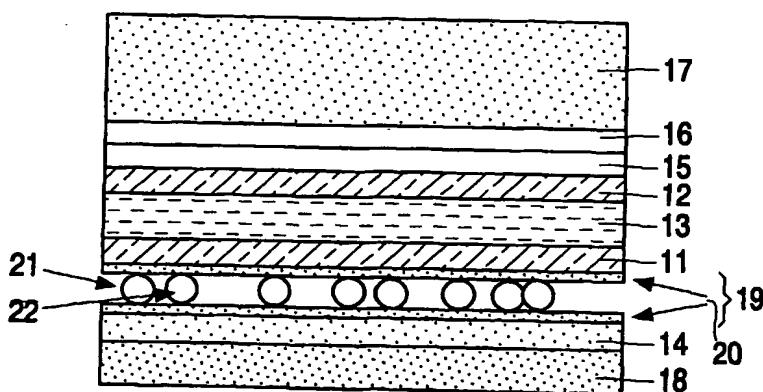
(43) International Publication Date
5 August 2004 (05.08.2004)

PCT

(10) International Publication Number
WO 2004/066136 A3

- (51) International Patent Classification⁷: G06F 3/033, (84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- (21) International Application Number: PCT/IB2003/006339
- (22) International Filing Date: 24 December 2003 (24.12.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 03100097.9 20 January 2003 (20.01.2003) EP
- (71) Applicant (*for all designated States except US*): KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): DESTURA, Galileo, J., A. [PH/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). VAN BERKEL, Cees [NL/GB]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). CIRKEL, Peter, A. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (74) Agent: RAAAP, Adriaan, Y.; Philips Intellectual Property & Standards, Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
- Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 16 December 2004
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: TOUCH SENSITIVE DISPLAY DEVICE



(57) Abstract: A touch-sensitive display is made by incorporating a touch sensitive layer (19) between two optical layers (4, 15, 16) or between a substrate (11, 12) and a further optical layer (14, 15, 16).

INTERNATIONAL SEARCH REPORT

In
International Application No
PCT/IB 03/06339A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06F3/033 G02F1/133

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G06F G02F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 814 760 A (JOHNSTON JAMES P ET AL) 21 March 1989 (1989-03-21) column 1, line 38 - column 3, line 12 column 4, line 4 - line 63 figures 1-4 ----- EP 0 773 497 A (SYMBIOS LOGIC INC) 14 May 1997 (1997-05-14) column 1, line 56 - column 2, line 13 column 6, line 2 - line 11 column 6, line 57 - column 8, line 32 column 9, line 7 - column 11, line 50 claims 1-3 figures 1,3-5 ----- -/-	1,5-7
X		1-7

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
2 November 2004	08/11/2004

Name and mailing address of the ISA
 European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Butler, M

INTERNATIONAL SEARCH REPORT

In Application No
PCT/IB 03/06339

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 501 529 B1 (KIYOOKA FUMITOSHI ET AL) 31 December 2002 (2002-12-31) column 1, line 60 - column 3, line 45 column 5, line 50 - column 6, line 8 figures 3-5,8,9 ----- US 5 949 501 A (IZUNO AKINOBU ET AL) 7 September 1999 (1999-09-07) column 2, line 9 - line 31 column 6, line 63 - column 7, line 46 column 8, line 41 - line 61 column 9, line 24 - column 10, line 20 figures 1-5 ----- WO 01/02899 A (E INK CORP) 11 January 2001 (2001-01-11) page 3, line 6 - line 17 page 6, line 7 - page 8, line 12 page 10, line 6 - line 19 page 16, line 9 - line 24 figures 1-3 ----- WO 2004/013746 A (JOHNSON MARK T ; RAAP ADRIAAN Y (NL); DE BOER DIRK K G (NL); KONINKL P) 12 February 2004 (2004-02-12) Whole document ----- US 2002/025837 A1 (LEVY DAVID H) 28 February 2002 (2002-02-28) paragraph '0002! paragraph '0004! - paragraph '0006! paragraph '0030! - paragraph '0032! paragraph '0129! paragraph '0135! figure 4 ----- EP 0 817 110 A (NOKIA MOBILE PHONES LTD) 7 January 1998 (1998-01-07) column 1, line 57 - column 2, line 30 column 3, line 38 - column 4, line 25 figures 1,2,5 ----- GB 2 321 707 A (CRANNY ANDREW WILLIAM JAMES ; SION RUSSELL PAUL (GB); ATKINSON JOHN KA) 5 August 1998 (1998-08-05) abstract page 3, line 3 - page 7, line 29 figures 1-6 -----	1-7 1-7 1-7 1-7 1-7 2-4 5-7 3

INTERNATIONAL SEARCH REPORT

Information on patent family members

II Application No

PCT/IB 03/06339

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 4814760	A	21-03-1989		AU 582181 B2 AU 4645085 A CA 1254685 A1 DE 3584242 D1 EP 0189590 A2 JP 1889137 C JP 6018031 B JP 61157931 A		16-03-1989 03-07-1986 23-05-1989 31-10-1991 06-08-1986 07-12-1994 09-03-1994 17-07-1986
EP 0773497	A	14-05-1997		US 5777596 A DE 69614635 D1 DE 69614635 T2 EP 0773497 A1 JP 9274537 A		07-07-1998 27-09-2001 07-02-2002 14-05-1997 21-10-1997
US 6501529	B1	31-12-2002		JP 2001075074 A		23-03-2001
US 5949501	A	07-09-1999		JP 9282095 A		31-10-1997
WO 0102899	A	11-01-2001		AU 5779200 A EP 1192504 A2 JP 2003504666 T WO 0102899 A2 US 6392786 B1		22-01-2001 03-04-2002 04-02-2003 11-01-2001 21-05-2002
WO 2004013746	A	12-02-2004		WO 2004013746 A2		12-02-2004
US 2002025837	A1	28-02-2002		AU 6478101 A BR 0111232 A CA 2410454 A1 CN 1439164 T EP 1290705 A2 JP 2003536307 T WO 0195358 A2		17-12-2001 27-07-2004 13-12-2001 27-08-2003 12-03-2003 02-12-2003 13-12-2001
EP 0817110	A	07-01-1998		FI 962692 A EP 0817110 A2 JP 10097382 A		29-12-1997 07-01-1998 14-04-1998
GB 2321707	A	05-08-1998		NONE		